a ventilating apparatus which M. Mathieu has invented. The incisions which were made in the part caused so little pain, that there could be no doubt that the sensibility was deadened by this means.[1]

[However deficient in success hitherto, local anæsthesia is of such great practical importance, that it well deserves to be investigated and carried out, with all the appliances and resources of modern ingenuity. We understand that Professors Syme and Simpson have made trial of the anesthetic douche in cases of abscess, but although a slight and superficial impairment of the sensibility was noticed, no diminution of the feeling of pain took place. Dr. James Arnott's plan, of freezing the skin and subjacent parts, seems to us well adapted for minor operations in surgery, and we feel surprise that it has not been more extensively tried in this country. M. Velpeau has pronounced strongly in its favour. M. Richat has published some cases of operations performed without pain, by means of an ingenious apparatus, constructed by M. Mathieu (figured *Gaz. des Hop.* April 1). By this instrument, a fair amount of ether and of air is simultaneously directed to the part. Dr. Liégard (de Caen) has pointed out that the peasants in Lower Normandy have long been in the habit of preventing pain by squeezing strongly the forearm or leg, when operations are performed on the hands or feet.]—*Monthly Journ. Med. Sci.* May, 1854.

14. *Production of Local Anœsthesia.*—Dr. Snow in a paper read before the Physiological Section of the Medical Society of London (April 10, 1854), said that when a piece of folded lint moistened with chloroform was applied to the skin, and covered with some impermeable substance, it caused a sensation like that occasioned by a mustard poultice, and the skin became red. After the lapse of a few minutes to half an hour, there was a feeling of numbness in the part, and its sensibility was diminished, so that pricking with a needle did not cause so much pain as usual. He had never succeeded, however, in causing complete anæsthesia by chloroform applied to the sound skin, nor had he been more successful with several other agents he had tried. Hydrocyanic acid of 5 per cent., and a strong solution of cyanide of potassium in water, caused a diminution of sensibility, with less irritation, than any of the other medicines. The difficulty of causing local anæsthesia depended on the slow and sparing manner in which fluids permeated the cuticle, and the readiness with which the small quantity which did permeate was carried away in the blood. When the skin was denuded of cuticle, it was readily made insensible, even by the vapour of chloroform confined over it, and the raw surface could be rubbed without causing any sensation. The only means they as yet possessed of producing complete local anæsthesia was that of refrigeration, proposed by Dr. James Arnott. When a part was cooled by the application of a mixture of pounded ice and salt, it became of the colour of parchment, as hard as suet, and perfectly insensible. The insensibility, however, extended to only a very slight depth. He had congealed in this manner part of the palmar surface of the hand and fingers, but, on separating the latter, and examining the dorsal surface of the web which connects them, he found it quite sensible to the pricks of a needle, even when removed from the hard and insensible palmar surface by a thickness of only the tenth of an inch. The burning kind of pain caused by the application of ice and salt to a sensitive part, such as the hand or fingers, was very considerable, and it was still greater about five minutes afterwards, when sensibility returned. In fact, if he (Dr. Snow) required the application for any other purpose than to watch its effects, he would inhale chloroform while it was done. He therefore did not think this process very available, even for superficial operations, except when the surgeon or the patient had an objection to the inhalation of chloroform. A new plan had lately been tried in the hospitals of Paris, with some amount of success, in preventing the pain of minor operations by refrigeration. It consisted in dropping ether on the part, and increasing the evaporation with the bellows. He (Dr. Snow) had tried this on a patient of Mr. Ure, in St. Mary's Hospital, preparatory to his dividing the callous edges of an ulcer of the leg. It was quite successful at that edge

[1] Gaz. de Hopitaux.

of the ulcer where the ether had chiefly fallen, but less so at the other side. This process caused less pain than the application of ice and salt; and M. Matthieu, an instrument maker of Paris, had contrived a means by which it could he more effectually applied than in the above case.—*Med. Times and Gaz.* April 22, 1854.

15. *Modes of Exhibiting Cod-liver Oil.*—Those who have had large experience of the use of cod-liver oil must have been astonished at the surprising way in which, in a great majority of cases requiring its exhibition, it agrees. It is not easy to mark out beforehand any class of symptoms which contra-indicate its employment, if the existence of strumous disease call for it. Often symptoms, apparently the most likely to he aggravated, are removed or mitigated by its use in a way which surprises both patient and prescriber. Thus, in phthisical cases, a red tongue, acid eructations, hiliousness, hearthurn, liahility to sick headaches, aching pain between the scapulæ, an instinctive and intense dislike to fat or greasy aliment, are symptoms which, without a question, may often be remedied by the use of cod-liver oil. These statements are, of course, applicable only to a certain proportion of cases; there are others in which its use is clearly indicated, but in which the prescriber's ingenuity is taxed to the utmost to get the patient to bear tbe remedy. The following memoranda on this part of the suhjcct, founded on our observations of the practice of the various London hospitals, but more especially of the City Hospital for Diseases of the Chest, may probably be acceptahle to some of our readers.

Cases in whicb difficulty occurs may be divided into the following classes: 1. *Those in which the nauseous taste of the oil forms the obstacle.* In these, the use of the pale oil will generally obviate the difficulty; it is, however, four times the expense of the brown, and is more liable to be adulterated, which are great objeotions. The taste of the brown oil may often be concealed by taking it floating on some bitter menstruum. A wineglassful of strong coffee, of ginger wine, of infusion of quassia, or, perhaps, best of all, a quinia draught, containing a drachm of the tincture of orange-peel, may serve tbis purpose. Tbe oil may be stirred up in a little hot milk, and swallowed so warm that the sensation of heat overpowers the taste. Should these expedients fail, tbe patient may be instructed to put into the mouth a teaspoonful of marmalade or of black currant preserve; and, having well luhricated all parts with the sweetmeat, so as to fully absorb the attention of the gustatory nerve, then swallow the oil. Advantage frequently results from closing the nostrils when taking tbe dose. 2. *Those in which the oil excites sickness, and is quickly rejected by vomiting.* Many of tbe expedients mentioned above will obviate also this source of difficulty, more especially tbe use of bitters. Very few cases, indeed, will resist tbe influence of hydrocyanic acid and bismuth exhibited three times daily for a few days preparatory to the trial of the oil, and continued during its employment. Patients should be directed to eat a little dry biscuit or hread-crust hefore the oil, and then to take it floating on a cup of the coldest spring water. If these fail, as a last resource, the dose should he given in the recumbent posture, that is, in the morning, an hour or two before getting up, and in the evening, after going to hed. This last suggestion is one emanating, we believe, from Dr. Birkett, of the City Chest Hospital, and often answers very satisfactorily. 3. *Cases in which the oil cannot be digested.* This is a large and very important class. Patients complain that they have a great repugnance to the oil, that it makes them feel sick for hours afterwards, though seldom causing actual vomiting; that everything they take after it seems to taste of it, and that thus all relish for food is destroyed; that the oil "rises," either oily or with a most nauseous acid flavour. They frequently have bilious attacks; and, for a day or two in each week, probably the repugnance to the remedy is so great that they are quite unable to overcome it. If pushed under these circumstances, the oil does more harm than good; there are, however, extremely few such cases in which careful attention to the digestive organs will not enable its administration to be successfully conducted.

We copy the following formula from the Pharmacopœia of tbe City Hospital